CLAIMS

1, 2. (canceled)

3. (previously presented) The network according to claim 41 wherein the best path is one that minimizes a selected cost function.

4. (original) The network according to claim 3 wherein the cost function is composed of one or more metrics that are defined by the goals of the particular network.

5. (original) The network according to claim 4 wherein the metric includes the number of nodes that a message must pass through before reaching the destination node.

6. (original) The network according to claim 4 wherein the metric includes the probability of successful transmission though a route.

7. (currently amended) The network according to claim 4 [[14]] wherein the metric includes the worst probability of successful transmission in a segment of the route.

8. (original) The network according to claim 4 wherein the metric includes the traffic burden on individual nodes in the network.

9. (currently amended) The network according to claim [[14]] 41 wherein a path is evaluated by selecting a parameter and basing the decision on whether a given route is the best route for the transmission based on the single weakest point along the path.

10. (currently amended) The network according to claim [[14]] 41 wherein a path is evaluated by selecting a parameter and basing the decision on whether a given route is the best route for the communication based on the single best point along the path..

11. (currently amended) The network according to claim [[14]] 41 wherein a value is determined for each of a selected group of parameters and based on the relative value of each parameter a weighted computation is made to determine the best route along the path.

12. (original) The network according to claim 11 wherein the information concerning a path for a communicating a message from a node is determined by said node only from communications from the nodes that are in direct communication with said node

13. (original) The network according to claim 9 wherein the information concerning a path for a communicating a message from a node is determined by said node only from communications from the nodes that are in direct communication with said node.

14. (canceled)

15. (previously presented) The network according to claim 41 wherein information that is used for path selection is maintained in a table in each node.

16. (original) The network according to claim 15 wherein each table has one or more rows indexed by a final destination and one or more columns each containing that node's computation of a specific metric for the path to that destination.

17. (original) The network according to claim 16 wherein the information that is placed in a node's table is determined by processing information from each neighboring node's table.

18. (original) The network according to claim 4 wherein the metrics may be sent to neighbor nodes as a separate transmission.

19. (original) The network according to claim 4 wherein the metrics may be sent to neighbor nodes by concatenation with normal message traffic.

20. (original) The network according to claim 18 wherein changes in the metrics are prioritized according to the time of their last update.

21. (canceled)

22. (previously presented) The method according to claim 42 wherein communication paths are re-evaluated as new information concerning a path is generated by neighboring nodes.

23. (original) The method according to claim 22 wherein the best path is one that minimizes a selected cost function.

24. (original) The method according to claim 23 wherein the cost function is composed of one or more metrics that are defined by the goals of the particular network.

25. (original) The method according to claim 24 wherein the metric includes the number of nodes that a message must pass through before reaching the destination node.

26. (original) The method according to claim 24 wherein the metric includes the probability of successful transmission though a route.

27. (original) The method according to claim 24 wherein the metric includes the worst probability of successful transmission in a segment of the route.

28. (original) The method according to claim 24 wherein the metric includes the traffic burden on individual nodes in the network.

29. (original) The method according to claim 24 wherein a path is evaluated by selecting a parameter and basing the decision on whether a given route is the best route for the transmission based on the single weakest point along the path.

30. (original) The method according to claim 24 wherein a path is evaluated by selecting a parameter and basing the decision on whether a given route is the best route for the communication based on the single best point along the path.

31. (original) The method according to claim 24 wherein a value is determined for each of a selected group of parameters and based on the relative value of each parameter a weighted computation is made to determine the best route along the path.

32, 33. (canceled)

34. (original) The method according to claim 22 wherein information that is used for path selection is maintained in a table in each node.

35. (original) The method according to claim 34 wherein each table has one or more rows indexed by a final destination and one or more columns each containing that node's computation of a specific metric for the path to that destination.

36. (original) The method according to claim 24 wherein the metrics may be sent to neighbor nodes as a separate transmission.

37. (original) The method according to claim 24 wherein the metrics may be sent to neighbor nodes by concatenation with normal message traffic.

38. (original) The method according to claim 24 wherein changes in the metrics are prioritized for sending to neighboring nodes according to the time of their last update.

39. (original) The method according to claim 37 wherein the forwarding of path metric information throughout the network adds only a relatively small amount of overhead to normally transmitted messages.

40. (canceled)

41. (previously presented) A network comprising a plurality of nodes wherein each of said nodes has a memory, a computing capability, and an ability to communicate with one or more other nodes wherein a communication sent from a source node to a destination node is sent along a path containing one or more nodes wherein each of said nodes in said path that receives said communication determines the best path for said communication to the destination node through a neighboring node based only on communications from the nodes that are in direct communication with said node wherein said

communication paths to the best neighboring node are re-evaluated independently by each node as new information concerning any path is received from any neighboring node.

42. (previously presented) A network comprising a plurality of nodes wherein each of said nodes has a memory, a computing capability, and an ability to communicate with one or more other nodes wherein a communication sent from a source node to a destination node is sent along a path containing one or more nodes wherein each of said nodes in said path that receives said communication determines the best path for said communication to the destination node through a neighboring node based only on communications from the nodes that are in direct communication with said node, wherein one or more path parameter metrics are independently evaluated at each node.

43. (previously presented) A method of transmitting a communication from a source node to a destination node in a network having a plurality of nodes comprising determining the best path for said communication from said source node to the destination node through each neighboring node based on information received from each neighboring node; transmitting said communication from said source node to a the neighboring receiving node determined to be the best path for said communication to said destination node; determining the best path from the receiving node to the destination node through each neighboring node based on information received from each of said neighboring nodes; continuing the steps until the destination node receives the communication, wherein said communication provides parameter information about a link to each neighboring node and wherein each node determines the best neighboring node to pass the message to and wherein such node's independent determination of

the best node forms a most efficient link of nodes to the desired final node.

44. (previously presented) A method of transmitting a communication from a source node to a destination node in a network having a plurality of nodes comprising determining the best path for said communication from said source node to the destination node through each neighboring node based on information received from each neighboring node; transmitting said communication from said source node to a the neighboring receiving node determined to be the best path for said communication to said destination node; determining the best path from the receiving node to the destination node through each neighboring node based on information received from each of said neighboring nodes; continuing the steps until the destination node receives the communication, wherein said communication paths are re-evaluated by each node as new information concerning any path is received from any neighboring node.

45. (previously presented) The network according to claim 43 wherein the best path is one that minimizes a selected cost function.

46. (previously presented) The network according to claim 45 wherein the cost function is composed of one or more metrics that are defined by the goals of the particular network.

47. (previously presented) The network according to claim 46 wherein a value is determined for each of a selected group of parameters and based on the relative value of each parameter a weighted

computation is made to determine the best route along the path.

48. (previously presented) The method according to claim 44 wherein the best path is one that minimizes a selected cost function wherein the cost function is composed of one or more metrics that are defined by the goals of the particular network.

49. (previously presented) The method according to claim 48 wherein the metric includes the number of nodes that a message must pass through before reaching the destination node.

50. (previously presented) The method according to claim 49 wherein a value is determined for each of a selected group of parameters and based on the relative value of each parameter a weighted computation is made to determine the best route along the path.

CONCLUSION

For the foregoing reasons, the application should be in condition for allowance.

Respectfully submitted,

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CERTIFICATE OF MAILING

I hereby certify that the foregoing Response was mailed by first class mail, postage prepaid, in an envelope addressed to the Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 on this 25th day of July, 2005.

Thomas A. O'Rourke